



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Antimicrobials Division (7510P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

89110-37

Date of Issuance:

10/19/2020

NOTICE OF PESTICIDE:

☒ Registration
☐ Reregistration
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

BIONIX ABQ80

Name and Address of Registrant (include ZIP Code):

Chris Harken
Isomeric Industries
3400 Research Forest Dr., Suite B4
The Woodlands, TX 77381

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Antimicrobials Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Eric Miederhoff
Product Manager 31
Regulatory Management Branch I
Antimicrobials Division (7510P)
Office of Pesticide Programs

Date:

10/19/2020

2. You are required to comply with the data requirements described in the DCI or EDSP Order identified below:

- a. Alkyl (50%C14, 40%C12, 10%C16) dimethyl benzyl ammonium chloride GDCI-069105-30882; GDCI-069105-1679

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI or EDSP Order listed above, you may contact the Reevaluation Team Leader (Team 36): <http://www2.epa.gov/pesticide-contacts/contacts-office-pesticide-programs-antimicrobial-division>

3. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, “EPA Reg. No. 89110-37.”
4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Assurance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 09/30/2020
- Alternate #1 dated 09/30/2020

If you have any questions, please contact Karen M. Leavy by phone at (703)-308-6237, or via email at Leavy.Karen@epa.gov.

Enclosure

BIONIX ABQ80

ACTIVE INGREDIENTS:

Alkyl (50% C_{14} , 40% C_{12} , 10% C_{16}) dimethyl benzyl ammonium chloride.....80.0%

OTHER INGREDIENTS;.....20.0%

TOTAL:.....100.0%

EPA Reg. No. 89110-GT

EPA Est. _____

NET CONTENTS: As Marked on Container

**KEEP OUT OF REACH OF CHILDREN
DANGER**

FIRST AID	
If in eyes:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
If on skin or clothing:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.
If swallowed:	<ul style="list-style-type: none">• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.• Call poison control center or doctor immediately for treatment advice.
If inhaled:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
In case of emergency, call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.	

[See back/side panels for additional Precautionary Statements]

In case of emergency, call INFOTRAC: (800)-535-5053

**Manufactured by:
ISOMERIC INDUSTRIES**

3400 Research Forest Drive, Suite B4,
The Woodlands, TX 77381
1-833-BIONIXX

ACCEPTED

10/19/2020

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 89110-37

Bionix ABQ80 (89110-GT)

Isomeric Industries

Label Version (5) October 16, 2020

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Corrosive. Causes irreversible eye damage and skin burns. May be fatal if swallowed, absorbed through skin or inhaled. Do not get in eyes, on skin or on clothing. Do not breathe vapor or spray mist. Wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter. Higher level respirators that are NIOSH approved for particulates can also be used. Wear goggles or face shield, chemical-resistant gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

PHYSICAL OR CHEMICAL HAZARDS: Combustible. Do not use or store near heat or open flame. Do not mix with oxidizers, soap or other anionic materials.

ENVIRONMENTAL HAZARDS:

(If container is equal to or greater than 5 gal., the following statement must appear on the label.)

This product is toxic to fish, aquatic invertebrates, oysters and shrimp. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

(If container is less than 5 gal., or for swimming pool use, use the following as an alternate to the above statement.)

This product is toxic to fish, aquatic invertebrates, oysters and shrimp.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Please read entire label and use strictly in accordance with precautionary statements and directions.

Do not use water containing residues from use of this product to irrigate crops for food or feed.

WATER TREATMENT APPLICATIONS [Not for Use in California]:

AIR WASHERS, INDUSTRIAL AND/OR COMMERCIAL RECIRCULATING COOLING WATER TOWERS, RETORT WATER SYSTEMS, EVAPORATIVE CONDENSERS, HEAT EXCHANGE, TRANSFER WATER SYSTEMS, INFLUENT SYSTEMS:

For best results, clean heavily contaminated systems before treatment with this product. If soap or anionic detergent is used, rinse thoroughly before charging with this algaecide. Cooling tower waters that are inherently low in algae growth and bacteria count may be adequately controlled by the lower range of these dosages. Repeat every seven days or increase frequency if needed. Should slime develop again, repeat initial dosage.

For use only in industrial air washers and air washer systems which have mist-eliminating components.

1. **Dosing Location:** This product must be applied at a point in the system where it will be uniformly mixed, such as the basin area, the sump, or another reservoir or collecting area.
2. **Dosing Conditions:** This product must be applied when the system is in jeopardy of being affected or after cleaning systems where efficiency is already impaired. Tower bleed off valves must be closed to permit a retention time of 4 hours.
3. **Method of Application:**
 - a. **INTERMITTENT OR SLUG METHOD**

Initial Dose: When the system is noticeably fouled, apply 3.2 – 6.4 oz. of this product per 1,000 gal. of water (20 - 40 ppm active) in the system. Repeat until control is achieved.
Subsequent Dose: When microbial control is evident, add 0.8 – 2.4 oz. of this product per 1,000 gal. of water (5 – 15 ppm active) in the system weekly or as needed to maintain control.

b. MODIFIED INTERMITTENT METHOD

Initial Dose: When the system is noticeably fouled, apply 3.2 – 6.4 oz. of this product per 1,000 gal. of water (20 - 40 ppm active) in the system. Apply half of this initial dose when half of the water in the system has been lost by blowdown.

Subsequent Dose: When control of microbial growth is evident, apply 0.8 – 2.4 oz. of this product per 1,000 gal. of water (5-15 ppm active) in the system. Apply half of this subsequent dose when half of the water in the system has been lost by blowdown.

c. CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, apply 3.2 – 6.4 oz. of this product per 1,000 gal. of water (20 - 40 ppm active) in the system.

Subsequent Dose: Maintain this treatment by starting a continuous feed of 0.8 – 2.4 oz. of this product per 1,000 gal. of water (5- 15 ppm active) lost by blowdown.

ONCE THROUGH FRESH AND SEA WATER COOLING SYSTEMS: Use of the product in either public/municipal or single or multiple family private/residential potable/drinking water systems is strictly prohibited. Use of the product in any cooling water system that discharges effluent within ¼ mile of either a public/municipal or single or multiple family private/residential potable/drinking water intake is strictly prohibited.

For best results, slug feed. The frequency of addition of microbiocide needed depends on many factors. To optimize your use of water treatment microbiocide, follow this procedure.

1. **Dosing Location:** This product is to be applied at a point in the system where it will be uniformly mixed, such as at the sump.
2. **Dosing Conditions:** This product must be applied when the system is in jeopardy of being affected or after cleaning systems where efficiency is already impaired.
3. **Method of Application:**

INTERMITTENT OR SLUG METHOD

Initial Dose: When the system is noticeably fouled, apply 0.16 – 1.6 oz. of this product per 1,000 gal. of water (1 – 10 ppm active) based on system flow rates. The minimum treatment is 6 to 24 hours. Repeat until control is achieved. Deactivation must be conducted prior to discharge from the system by using bentonite clay at a minimum ratio of 5 ppm clay to 1 ppm product.

Subsequent Dose: When microbial control is evident, add 0.08 - 0.8 oz. of this product per 1,000 gal. of water (0.5 – 5 ppm active) based upon system flow rates on an as needed basis to maintain control. Frequency of feed must be tied to an in-plant monitoring program for macro cowlng growth. Deactivation must be conducted prior to discharge from the system by using bentonite clay at a minimum ratio of 5 ppm clay to 1 ppm product.

DO NOT APPLY THIS PRODUCT MORE THAN 4 TIMES A YEAR. DEACTIVATION: This product must be deactivated prior to discharge of the NPDES outfall. **TO DEACTIVATE:** Use bentonite clay at a minimum ratio of 5 ppm clay to 1 ppm product. Deactivation must occur prior to discharge of the NPDES outfall. This product must be deactivated prior to discharge of the NPDES outfall.

BACTERIAL, FUNGAL & ALGAE SLIME CONTROL IN RECIRCULATING AUXILIARY, WASTEWATER SYSTEMS, AND BREWERY PASTEURIZERS:

Initial dose: Add this product at an initial dosage of 0.12 - 0.25 gal. of product per 5,000 gal. of system water (20 - 40 ppm active). Repeat until the desired level of control is achieved. Heavily contaminated systems must be pre-cleaned.

Subsequent dose: Once control is achieved, add maintenance dosages of 0.03 - 0.12 gal. of product per 5,000 gal. of system water (5 - 20 ppm active) weekly or as needed to maintain control. Apply this product to a point in the system where it will be uniformly mixed and distributed, such as the tower sump.

AUXILIARY SYSTEMS AND SERVICE WATER: Add 0.3 – 90 oz. of this product per 3,000 gal. of water (0.63 - 188 ppm active) in the system continuously. This product must be added to the system at a point of uniform mixing by slug or intermittent feed or by spraying onto a waste pile. The frequency of feed or spray and the duration of treatment will depend upon the severity of the contamination. Additions to water systems must be made during the pumping operation and as close to the pump as possible to ensure adequate mixing.

INDUSTRIAL WASTEWATER SYSTEMS - Wastewater Systems, Wastewater Sludge and Wastewater Holding Tanks [Not for use in CA.]: This product is added to a wastewater system or sludge at a convenient point of uniform mixing such as digester. Add 0.3- 1.6 gal. of this product per 1,000 gal. of wastewater or sludge (240 - 1280 ppm active).

OIL AND GAS APPLICATIONS [Not for Use in California]:

OIL FIELD, GAS PRODUCTION, TRANSMISSION PIPELINE, AND SYSTEMS: Specific treatment requirements vary among oil and/or gas field sites and subsystem components. Oil field fluids and subsystems most commonly requiring microbial contamination control are raw water sources, separators, ballasts, storage and mixing tanks, screens, surface injection equipment, production equipment (such as injection and production piping casting, completion and valving) and the formation itself. The primary point of treatment will vary among oil and/or gas field operations depending on the site problems, water-flood treatment methods and equipment. This product must be added where it will disperse rapidly and uniformly to the desired area of treatment.

Additions of this product must be made with the proper type of metering pump equipment, suction (low pressure) side of pumping equipment or similar device. This product must be added to the system by slug, continuous or on an intermittent basis, depending on the degree of system fouling.

OILFIELD WATER FLOOD OR SALTWATER DISPOSAL SYSTEMS AND FRACTURING FLUIDS: This product must be added to the water flood or saltwater disposal system at a point of uniform mixing.

1. **Continuous Use:** Add 0.06 – 0.25 gal. of this product per 10,000 gal. of water (5 - 20 ppm active) to control slime forming and sulfate reducing bacteria. Levels for effective control will vary depending on conditions at the site.
2. **Intermittent Use:** Add at a rate of 0.06 – 0.25 gal. of this product per 10,000 gal. of water (5 - 20 ppm active) for 4 - 8 hrs. per day, one to four times a week as needed to maintain control.
3. **Treatment of flow back return water** (Post Hydraulic Fracturing): Dose at a rate of 0.06 – 0.25 gal. of this product per 10,000 gal. of water (5 - 20 ppm active) for 4 - 8 hours per day, one to four times a week as needed to maintain control.

OIL FIELD INJECTION AND WASTEWATER: This product must be added to the water handling system at a point of uniform mixing such as the area of addition of makeup water to the holding tank.

Method of Application:

1. **Continuous Injection:** Add at a rate of 4.8 oz. of this product per 1,000 gal. of water (30 ppm) when system is noticeably fouled. When microbial control is evident, add this product at 4.8 oz. of this product per 1,000 gal. of water (15 ppm) to maintain control.
2. **Batch Treatment:** Add at a rate of 29 oz. of this product per 1,000 gal. of water (181 ppm) over a period of 4-6 hours one or more times per week when the system is noticeably fouled. When microbial control is evident, add this product at 14.4 oz. of this product per 1,000 gal. of water (90 ppm) over a period of 4-6 hours one or more time per week.

FRACTURING FLUIDS: Add this product to the frac water storage tanks or directly into the well head injection pipeline as the water is being pumped down-hole. Dose Range: Add 0.06 – 0.25 gal. of this product per 10,000 gal. of water (5 - 20 ppm active) to control slime forming and sulfate reducing bacteria. Levels for effective control will vary depending on conditions at the site.

OIL AND GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS: For the control of sulfate-reducing bacteria and slime forming bacteria, this product must be added to a gas production or transmission pipeline via direct injection at a point where uniform and maximum distribution will occur. The application must be conducted to ensure maximum distribution of the product through the internal surface of the pipeline by adding an amount of biocide which eventually comes out the other end of the pipeline. Criteria for success of the treatment will be reduction in bacterial count and/or corrosion rates. To facilitate application, it is desirable to dilute the product with an appropriate solvent immediately before use. The concentration in the solvent must not fall below an active concentration range of 500 - 1000 ppm active based on the volume of water in the pipeline. Injections to the system must be weekly, or as needed to maintain control.

GAS STORAGE WELLS AND SYSTEMS: To treat individual injection wells add 0.08 – 1.25 gal. of this product per 1,000 gal. (64 - 1000 ppm active) to produce an effective concentration. Update treatment rate as needed. This product must be diluted by the water present in the formation. Injection takes place before gas is injected and may be repeated yearly or as needed to maintain control.

PIPELINE PIGGING AND SCRAPING OPERATIONS: Add this product to slug water immediately following the scraper (keep the water volume to a minimum and contained between the scraper and the trailing pig). Add an effective concentration of 1.2 - 8 oz. of product per 100 gal. of water (75 - 500 ppm active) depending on the length of the pipeline and the severity of the biofouling.

DRILLING, COMPLETION AND WORKOVER FLUIDS SYSTEMS: This product is to be added to these fluid systems at a point of uniform mixing, such as a circulating, holding or mud tank. Levels for effective control will vary depending on conditions at the site and the severity of the contamination.

1. **Initial treatment:** Add 0.08 – 1.25 gal. of this product per 1,000 gal. (64 - 1000 ppm active) to a freshly prepared fluid.
2. **Maintenance dosage:** Add 0.08 – 1.25 gal. of this product per 1,000 gal. (64 - 1000 ppm active) to a freshly prepared fluid.

PACKER FLUIDS: This product is to be added to the packer fluid at a point of uniform mixing such as a circulating holding tank and other mixing device locations. Add 0.08 – 1.25 gal. of this product per 1,000 gal. of packer fluid (64 - 1000 ppm active) to a freshly prepared fluid. Levels for effective control vary depending on conditions at the site and the severity of contamination. Seal the treated packer fluid in the wall between the casing and the production tube.

HYDROTESTING: Treat water used to hydrotest pipelines or vessels by adding 0.08 – 1.25 gal. of this product per 1,000 gal. of water (64 - 1000 ppm active) depending on the water quality and length of time the equipment will remain idle.

ALGAE TREATMENT

SWIMMING POOLS: This product is compatible with most chemicals normally used in swimming pool maintenance; however, in its concentrated form, this chemical must not come in contact with high concentrations of chlorine or any other oxidizer. **DO NOT MIX THIS PRODUCT AND CHLORINE OR ANY OTHER OXIDIZER TOGETHER** before adding to the pool. These chemicals must be handled separately.

This product was formulated to complement most swimming pool sanitizers. This product is not a stand-alone product; it must be used with either halogen based or non-halogen based pool sanitizers. When using other products as outlined in the directions for this product, always follows directions on those products.

This product requires no special equipment for treating swimming pool water. The correct use dilution may be added directly to the pool in any spot or added to the water-circulation equipment. This product works best when added directly to the pool water by pouring around entire outside perimeter of pool.

Do not apply when swimmers are in the immediate vicinity. Do not allow swimming in pool for at least 15 minutes after this product has been applied.

Ensure all pool equipment is working properly. Backwash the filter system following manufacturer's directions. Adjust pH between 7.2 - 7.6. Adjust chlorine residual to 1 - 3 ppm. In a chlorine treated pool, add stabilizer to establish a minimum level of 40 - 50 ppm to reduce the degradative effects of sunlight upon the chlorine residual. Check for metals and if present add stain and scale inhibitor to prevent staining of pool surface due to metals. Check chlorine residual and adjust to 1 - 3 ppm.

TO DETERMINE POOL CAPACITY:

Rectangular Pools: Length (*times*) width (*times*) average depth (in feet) (*times*) 7.5 (*equals*) gal.

Round and Oval Pools: Long diameter (*times*) short diameter (*times*) average depth (in feet) (*times*) 5.9 (*equals*) gal.

[SWIMMING POOL TREATMENT DILUTION TABLE:

Swimming Pool Capacity gal. of Water	Initial Treatment	Maintenance Dose Booster Dose
5,000	1.6 oz.	0.4 oz.
10,000	3.2 oz.	0.8 oz.
20,000	6.4 oz.	1.6 oz.
25,000	8.0 oz.	2.0 oz.
30,000	9.6 oz.	2.4 oz.
40,000	12.8 oz.	3.2 oz.
50,000	16.0 oz.	4.0 oz.

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INITIAL APPLICATION FOR SWIMMING POOLS USING HALOGENATED OR NON-HALOGENATED SANITIZERS:

1. Backwash the filter thoroughly.
2. Vacuum algae debris and thoroughly brush pool.
3. Add 16 oz of this product per 50,000 gal. of water (3.2 oz. this product per 10,000 gal. of water) (or equivalent use dilution).
4. Vacuum pool after 24 hours to remove dead algae.
5. If algae are still visible repeat dose(steps 3 & 4) as necessary until pool is free of visible algae.
6. Once algae are under control, clean filter and return to normal operation.

MAINTENANCE APPLICATION: Add 4 oz. of this product per 50,000 gal. of water (or equivalent use dilution) every 3 - 5 days. If high temperatures prevail or pool has unusually heavy use, add maintenance dose more frequently.

BOOSTER APPLICATION: Add 4 oz. of this product per 50,000 gal. of water (or equivalent use dilution) after a heavy or prolonged rainfall or when there is a heavy bathing load.

The directions should be followed even when the pool is not in use. If algae growth is noticeable, apply initial dose.

VACATION TREATMENT: When you are going to be away for one week or more, add 3.2 oz. of this product per 10,000 gal. of water (or equivalent use dilution) for every week unattended. Pour product around the edges of the shallow end of the pool, if shock is also being applied in the deep end of pool.

WINTERIZING TREATMENT : When swimming pool season is over, add 16 oz. of this product per 15,000 gal. of water (or equivalent use dilution) left in pool. This dose helps provide a measure of control of algae growth during the winter months.

Clean pool water line, shut down filter, drain pump and winterize as per manufacturer's instructions. Cover pool with solid cover, if possible. Pools without a solid cover may need a second treatment later in the non-swimming season.

FOR ALGAE TREATMENT OF OUTDOOR SPAS, WHIRPOOLS, HOT TUBS [Not for use in CA for outdoor use]:

Initial Dose: Add 1.6 oz. of this product per 5,000 gal. of pool water (or equivalent use dilution). Initial dose is used upon filling of spa, whirlpool, hot tub.

Maintenance Dose: Add 0.4 oz. of this product per 5,000 gal. of water (or equivalent use dilution). Maintenance dose should be added at 3 - 5 day intervals. If high temperatures prevail or spa, whirlpool, hot tub has unusually heavy use, add maintenance dose more frequently. Drain and clean spa/whirlpool/hot tub bath at least once a month or as needed depending on bather load.

BIRD BATHS: DO NOT use when fish are present. Clean to remove algae growth prior to filling birdbath and spray the exposed surface with a solution of 0.16 oz (1 tbsp). of this product per gallon of water (or equivalent use dilution). Allow to air dry and brush off dead algae.

WALKWAYS [Not for use in CA]: This product will inhibit the growth of algae on walkways. For heavy infestations, spray or swab surface with a solution of 0.8 oz. of this product per 5 gal. of water (or equivalent use dilution). Let stand for an hour or more then brush and wash away dead algae. Soak area again with the solution. Do not rinse. Allow to dry on the surface and repeat application when algae growth returns. For sprayer applications, use as a coarse spray only. Allow surfaces to remain wet for 10 minutes then air dry. Prepare a fresh solution daily or when visibly dirty.

(Note to Reviewer: The description of "Containerized" must be used for products registered/sold into CA.)

This product is not to be used in open water ways connected to larger watersheds or in waters that service natural habitats for aquatic and amphibious organisms. Do not use when fish or another wildlife (for example, amphibians) are present. This product is toxic to fish. Do not use this product when fish are present.

[FOUNTAIN AND POOL TREATMENT DILUTION TABLE:

Fountain or Pool Capacity gal. of Water	Initial Treatment	Maintenance Dose Booster Dose
195	0.06 oz.	0.01 oz.
390	0.12 oz.	0.03 oz.
781	0.25 oz.	0.06 oz.
1,562	0.5 oz.	0.12 oz.
3,125	1.0 oz.	0.25 oz.
6,250	2.0 oz.	0.5 oz.
12,500	4.0 oz.	1.0 oz.

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25,000	8.0 oz.	2.0 oz.
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FOR ALGAE TREATMENT OF {CONTAINERIZED} DECORATIVE FOUNTAINS AND POOLS:

Initial Dosage: Add 4 oz. of this product per 12,500 gal. of water (or equivalent use dilution) at any point that is convenient, such as the bowl, pool, or sump.

Weekly Maintenance: Add 1 oz. of this product per 12,500 gal. of water (or equivalent use dilution) every 3 - 5 days or as to maintain 0.5 ppm active. Each month drain and clean bowl. Refill with fresh water and repeat initial treatment. Draining removes airborne dirt, dust, contamination and alkali build-up.

DISCHARGE DIRECTIONS FOR [COMMERCIAL] AND [RESIDENTIAL] [POOL,] [SPA,] [HOT TUB,] AND [FOUNTAIN] USES

Before draining a treated [pool,] [spa,] [hot tub,] or [fountain] contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool or spa water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities.

PULP AND PAPER MILLS [Not for use in California].

Maximum use rate is 14 lb ai/ton of paper. Do not use to treat paper or paperboard which will contact food.

Product labels involving treatment of pulp and paper processes (eg., treatment of paper machine white water; catalase control in deinking loops; starch and sizing; coatings; fillers; pigments; adhesives; etc.), which result in finished products which may have direct or indirect food contact, must have FDA clearance for the entire formula via a food additive petition, and must state whether each use is cleared for "food contact" uses, and/or involves "non-food contact" uses. Products without FDA clearance must state: Do not use to treat paper or paperboard which will contact food.

SLIMICIDE APPLICATIONS: Apply this product to the paper making system at a point of uniform mixing such as, thin or thick stock chests, save-all tank, process tank or whitewater tank.

Initial Dose: When system is noticeably contaminated, add 0.12 - 25 gal. of this product per 100,000 gal. of whitewater (1 - 200 ppm active) to be treated as a continuous or slug dose. Repeat until control is achieved. Heavily fouled systems must be boiled out prior to initial treatment.

Subsequent Dose: When microbial control is evident, add 0.12 - 25 gal. of this product per 100,000 gal. of whitewater (1 - 200 ppm active) to be treated as necessary to maintain control.

CONTROL OF BACTERIAL, FUNGI/MOLD AND ALGAE SLIME ON PULP, PAPERBOARD & WET LAP:

Application of this product must be made at a point in the system where mixing action is good or can be made at the size press or water box. For inhibition of wet lap or sheet pulp this product must be applied to the dewatered pulp surface via applicator rolls or showers.

Dosing Application: Apply at a rate of 0.25 - 50 lbs. of this product per ton (dry basis) of pulp or paperboard produced. This product may be drip fed continuously from the drum, diluted and showered to the wet sheet or fed by suitable pumps.

WOOD PRESERVATIVES [Not for use in California].

Wood treated with ADBAC shall not be used in the construction of beehives.

SAP STAIN CONTROL: Seasonal variation in storage and shipping conditions, species and condition of wood must be considered in selection of end use concentration. For effective inhibition of mold and fungus, lumber and logs must be dipped or sprayed in a manner that ensures that all surfaces are uniformly treated.

To Apply to Lumber or Logs: Spray or dip lumber/logs with a use-solution of 0.6 gal. of this product per 20 - 200 gal. of water. Dip tanks and drip aprons must be roofed, paved and drained to prevent dilution and loss of the anti-stain solution.

For best results, green wood must be treated immediately, at least within 24 hours after cutting or sawing. Mold and fungus growth begins immediately after cutting so delayed treatment is much less effective and requires increased chemical concentration. Green, untreated lumber must not be used for stickers.

Freshly treated lumber must not be allowed to remain unprotected in heavy rains. Treated lumber must be stored under cover, or indoors, or at least 100 feet from any pond, lake, stream, wetland or river to prevent possible runoff of the product into the waterway. Treated lumber stored outdoors within 100 feet of a pond, lake, stream, wetland, or river must be either covered with plastic or surrounded by berm to prevent surface water runoff into the nearby waterway. If a berm is used around the site, it must consist of impermeable material (clay, asphalt, concrete) and be of sufficient height to prevent runoff during heavy rainfall events.

WOOD PRESERVATIVES: Wood articles that will be protected by these treatments would include millwork, construction timbers, decking, wood shingles, posts and other articles to be used in above ground applications.

[Treatment can be done by brush and/or spray for wood shingle applications, and by pressure, double vacuum, dip method for other wood products. Although dip, brush and spray cannot be used for protection against termites. Apply in well ventilated areas.]

(OR)

[Treatment can be done by brush or spray for wood shingle applications, and by pressure, double vacuum or dip method for other wood products. Wood articles that will be protected by these treatments would include millwork, construction timbers, decking, wood shingles, and posts.]

[This product can be used in combination with other EPA registered organic and inorganic wood preservatives or it can be used alone.] Dilute 0.8 - 4.8 oz. this product per gal. of either water or mineral spirits (or Sentry GoldSeal™) to produce a 0.5% - 3.0% active solution.

Percent Active Quat Solution	oz. of Product per gal.
0.5	0.8
1.0	1.6
1.5	2.4
2.0	3.2
2.5	4.0
3.0	4.8

BIONIX ABQ80 AND COPPER COMPOUNDS: This product is only to be used in combination with the following copper compounds in pressure treatment applications. Mix this product with water and either [{ACQ-C2 EPA Reg. No 83997-4 or ACQ-C EPA Reg. No. 83997-2} {NW 100-C, EPA Reg. No. 3008-87 or NW 200-C, EPA Reg. No. 3008-89}]. Refer to the product labels for [{ACQ-C and ACQ-C2} {NW 100-C and NW 200-C}] for precise mixing instructions.

BIONIX ABQ80 AND BORATES: This product is only to be used in combination with the following borates in pressure treatment or dip treatment applications. Mix this product and [{an EPA registered source of Disodium Octaborate Tetrahydrate} {using either} {Wood Bor, EPA Reg. No. 3008-61,} {BoraSol WP, EPA Reg. No. 69529-2,} {Timbersaver, EPA Reg. No. 83997-8, TimberSaver PT, EPA Reg. No. 83997-8,} {Tim-Bor, EPA Reg. No. 1624-39,} {Cellu-Treat DOT Wood Preservative, EPA Reg. No. 64405-8,} {Bor-Ram, EPA Reg. No. 64405-18} {Borathor Max PT, EPA Reg. No. 81824-11}] in water. Refer to the product labels for precise mixing.

This product is only to be used in combination with the following borates in brush or spray applications. Mix

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this product and [{Lum-Bor, EPA Reg. No. 19713-286} {or} {BoraSol WP, EPA Reg. No. 69529-2}], in water. Refer to the product label for precise mixing instructions.

This product is only to be used in combination with the following borates in dip treatment applications. Mix this product and [{BORA- CARE, EPA Reg. No. 64405-1} {or} {BoraSol WP, EPA Reg. No. 69529-2}], in water. Refer to the product label for precise mixing instructions.

(Note to Reviewer: The personal protective equipment statements must be used with the appropriate direction for use.)

PERSONAL PROTECTION EQUIPMENT FOR PRESSURE TREATMENT, DOUBLE VACUUM AND DIP TREATMENT

Applicators must wear gloves, which are chemical-resistant (such as nitrile or butyl) in all situations where dermal contact is expected (i.e. handling freshly treated wood and manually opening cylinder doors).

Individuals who enter pressure treatment cylinders and other related equipment that are contaminated with the wood treatment solution (e.g. cylinders that are in operation or are not free of all treatment solution) must wear coveralls over a long sleeved shirt and long pants, socks, chemical-resistant footwear, protective eyewear and a minimum of a filtering face piece NIOSH approved respirator (TC-84A) with any N filter. Higher level respirators that are NIOSH approved for particulates can also be used. Federal, State and local confined space entry procedures must be taken.

Applicators must not eat, drink or use tobacco products during those parts of the applications process that may expose them to the wood treatment formulation (e.g. manually opening/closing cylinder doors, moving trams out of cylinders, mixing chemicals, handling freshly treated wood). Wash thoroughly after skin contact and before eating, drinking, use of tobacco products or using restrooms.

Protective clothing must be changed when it shows signs of contamination. Applicators must leave protective clothing and footwear and equipment at the plant. Worn out protective clothing and footwear must be left at plant and disposed of in a manner approved for pesticide disposal and in accordance with state and federal regulations.

FOR PRESSURE TREATMENT APPLICATION: Place the wood article to be treated into the pressure cylinder and seal unit. Treat the wooden articles using the pressure treatment procedures consistent with the equipment being used and standard treatment practices. Treatment conditions must be such as to produce a 0.1 to 0.6 lb./cu. ft. retention in the treatment article. Treated wood is to be used for above ground uses only.

FOR DOUBLE VACUUM APPLICATION: Stack the wooden articles to be treated in the treatment vessel so that the preservative solution will have access to all sides of the articles. Seal the vessel. Reduce the pressure within the vessel to -10 in. for 5 minutes. Cover all the articles with preservative solution. Allow the pressure to return to atmospheric conditions and discharge the preservative solution. Reduce the pressure to -20 in. and maintain for 20 minutes. Allow the pressure to return to atmospheric and remove treated wood articles. Treatment conditions must be such as to produce a 0.1 - 0.6 lbs./cu. ft. retention of ADBAC in the treated article. Wood treated to this retention is to be used for above ground use only.

FOR DIP TREATMENT: Stack the wood to be treated on a suitable holder and convey the stack into the treating solution making sure the stack is completely immersed. Dip times must range from 30 seconds (individual pieces) up to 30 minutes (bundled wooden articles). Use a concentration of 0.5 - 3.0% active quaternary ammonium compound. The concentration should be customized to the degree of sap stain protection desired, which must be determined by an independent test on the intended species of wood.

(Note to Reviewer: The personal protective equipment statements must be used with the appropriate direction for use.)

PERSONAL PROTECTION EQUIPMENT FOR BRUSH AND SPRAY APPLICATIONS

Applicators must wear gloves, which are chemical-resistant (such as nitrile or butyl). Applicators must also

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wear coveralls over a long-sleeved shirt and long pants, socks, chemical-resistant footwear, goggles or face-shield and a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter. Higher level respirators that are NIOSH approved for particulates can also be used. Applicator must not eat, drink, or use tobacco during the application process. Use with adequate ventilation, mist or vapor generated by spraying this product may be harmful if inhaled. Wash thoroughly after skin contact, and before eating, drinking, use of tobacco products or using restrooms. Protective clothing must be changed when it shows signs of contamination. Brush/Spray treatment may require frequent changing. Discard clothing and other absorbent materials that have been drenched or heavily contaminated. Do not reuse them.

Follow manufacturer's instructions for cleaning/maintaining protective equipment. If no such instructions exist for washables, use detergent and hot water. Keep and wash protective equipment separate from other laundry.

Worn out protective clothing and work shoes or boots must be disposed of in a manner approved for pesticide disposal and in accordance with State and Federal regulations.

FOR BRUSH OR SPRAY APPLICATIONS: A 0.5% - 3% active quaternary ammonium solution with water (or Sentry GoldSeal™) may be applied by brush or spray for use on wood shingles or shake roofs, siding on existing homes by commercial applicators, on interior construction products and surfaces such as lumber, concrete, sheetrock, wallboard, block and steel. Use low-pressure equipment for spray applications. A moderately fine spray, not an aerosol or fog, generally provides the best coverage at practical product concentrations. Apply only to point of runoff.

FOR MANUFACTURING USE

For formulation into antimicrobial products for use in agricultural/farm premises, structures, buildings, and equipment; dairy farm milk handling facilities, equipment, storage rooms/houses/sheds, food processing plants, food handling areas, food distribution equipment and premises; eating establishment premises and equipment; commercial, institutional, and industrial premises and equipment (floors, walls, storage areas); domestic dwellings, indoor premises; and medical institutional critical care and noncritical care premises and laundry; fountains/water displays/decorative ponds/standing water, sewage treatment systems, spas, air conditioner/refrigeration condensate water systems, air washer and industrial scrubbing systems, once-through and recirculating industrial/commercial cooling water systems, pulp/paper mill water systems, auxiliary water and waste water systems, and swimming pools. Gas/oil drilling muds/packer fluids, mushroom houses/empty premises and equipment, wood preservation, egg handling equipment and rooms, egg washing treatment, poultry processing plant equipment/premises, meat processing plant equipment/premises and gas/oil field recovery injection water systems and oil field water flood/salt water disposal systems. Formulators using this product are responsible for providing data for the EPA registration of their formulated products.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE: Store only in original container. Keep this product under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

[For non-refillable containers equal to or less than 5 gal:

Non-Refillable Container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Fill the container ¼ full with water and recap. Shake for 10 seconds.

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Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.]

[For non-refillable containers greater than 5 gal:

Non-Refillable Container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip back and forth several times. Turn the container over onto its other end and tip back and forth several times. Follow Pesticide Disposal instructions for rinsate disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.]

[Refillable containers:

Refillable Container. Refill this container with this product only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal empty the remaining contents from this container into application equipment or a mix tank. Fill container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.]

WARRANTIES AND WARRANTY DISCLAIMERS

Conditions of Sale: Isomeric Industries ("ISOMERIC") warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to ISOMERIC. To the extent consistent with applicable law, ISOMERIC DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. To the extent consistent with applicable law, ISOMERIC SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT, or for damages in the nature of penalties, and the buyer and the user waive any right that they may have to such damages. ISOMERIC's sole liability and Buyer's and User's exclusive remedy shall be limited to the refund of the purchase price. ISOMERIC DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.